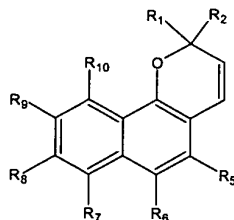


**CLEAN COPY OF ALL AMENDED AND NEW CLAIMS PROVIDED IN  
COMPLIANCE WITH 37 C.F.R. 1.121**

1. A photochromic [1,2-b]naphthopyran having a fluoro substituted in at least one of the 7-position or the 9-position of the naphthopyran, the [1,2-b]naphthopyran comprising either 2-phenyl or 2-heteroaryl groups, and the [1,2-b]naphthopyran having either 7-fluoro-9-alkoxy or 7-alkoxy-9-fluoro substituents.

25. A naphthopyran comprising 2,2-(4-methoxy-4'-pyrrolidino)diphenyl-5-methylol-7-fluoro-9-methoxy-[2H]-naphtho[1,2-b]pyran.

26. A naphtho[1,2-b]pyran compound having the following graphic formula:



wherein, R<sub>7</sub> and R<sub>9</sub> are different and they each represents a fluorine or an alkoxy group -OR.  
when R<sub>7</sub> or R<sub>9</sub> is a group -OR, R represents

a linear or branched alkyl group,

a cycloalkyl or bicycloalkyl group,

a linear or branched haloalkyl group,

an aryl or heteroaryl group, optionally substituted by at least one electron donating group,

an aralkyl or heteroaralkyl group, where the aryl or heteroaryl group is defined above.

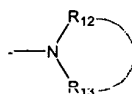
R<sub>1</sub> or R<sub>2</sub> independently represent:

a phenyl ring or heteroaryl ring which is optionally substituted with at least one  
substituent selected from:

a halogen atom selected from fluorine, chlorine and bromine,

a hydroxy group,

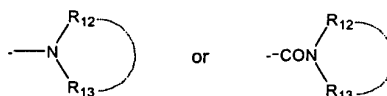
a linear or branched alkyl group comprising 1 to 12 carbon atoms,  
a linear or branched alkoxy group comprising 1 to 12 carbon atoms,  
a haloalkyl or haloalkoxy group corresponding to the (C1 -C12) alkyl or alkoxy groups above respectively which are substituted with at least one halogen atom,  
a linear or branched alkenyl group comprising 2 to 12 carbon atoms,  
an -NH<sub>2</sub> group,



an -NHR<sub>11</sub> group, R<sub>11</sub> representing a linear or branched alkyl group comprising 1 to 6 carbon atoms, a group, in which R<sub>12</sub> and R<sub>13</sub>, which are the same or different, independently representing a linear or branched alkyl group comprising 1 to 6 carbon atoms, or representing (together with the nitrogen atom to which they are bound) a 5- to 7-membered ring which can comprise at least one other heteroatom selected from oxygen, sulfur and nitrogen, said nitrogen being optionally substituted with an R<sub>14</sub> group, which is a linear or branched alkyl group comprising 1 to 6 carbon atoms,  
a polyether, polyamide, polycarbonate, polycarbamate, polyurea or polyester residue,  
an aralkyl or heteroaralkyl group, the alkyl group, which is linear or branched, comprising 1 to 4 carbon atoms and the aryl and heteroaryl groups having the definitions given above,  
an aryl or heteroaryl group defined above, or  
the two substituents R<sub>1</sub> and R<sub>2</sub> together forming ring group such as those represented by an adamantyl, norbornyl, fluorenylidene, 5,5- or 10,10-di(C1 - C6)alkylanthracenyliidene, 5 (or 10)-(C1-C6)alkyl-5 (or 10)-OH (or OR)anthracenyliidene or spiro(C5 -C6)cycloalkylanthracenyliidene ring group; said ring group being optionally substituted with at least one of the substituents listed above in the definitions for R<sub>1</sub>, R<sub>2</sub>; said ring group being optionally substituted with two adjacent groups that form a 5- to 6-member aromatic or non-aromatic ring which can comprise at least one heteroatom selected from oxygen, sulfur, and nitrogen;

R<sub>5</sub>, R<sub>6</sub>, R<sub>8</sub>, and R<sub>10</sub> are the same or different and they represent, independently:

a hydrogen,  
 a halogen selected from fluorine, chlorine or bromine,  
 a linear or branched alkyl group which comprises 1 to 12 carbon atoms,  
 a cycloalkyl or bicycloalkyl group comprising 3 to 12 carbon atoms,  
 a linear or branched alkoxy group comprising 1 to 12 carbon atoms,  
 a haloalkyl, halocycloalkyl, or haloalkoxy group corresponding to the alkyl, cycloalkyl, alkoxy groups above respectively, which are substituted with at least one halogen atom selected from fluorine, chlorine and bromine,  
 a linear or branched alkenyl or alkynyl group comprising 1-12 carbon atoms,  
 a linear or branched alkenyloxy or alkynyloxy group comprising 1-12 carbon atoms,  
 an aryl or heteroaryl group having the same definition as that given above for aryl or heteroaryl groups within the definitions of  $R_1$ ,  $R_2$ ,  
 an aralkyl or heteroaralkyl group, the alkyl group, which is linear or branched, comprising 1 to 4 carbon atoms, and the aryl and heteroaryl groups having the



same definitions as those given above for  $R_1$ ,  $R_2$ ,  
 an amine or amide group:  $-\text{NH}_2$ ,  $-\text{NHR}_{11}$ ,  $-\text{CONH}_2$ ,  $-\text{CONHR}_{11}$ ,  
 $R_{11}$ ,  $R_{12}$ , and  $R_{13}$  having their respective definitions given above for the amine substituents of the values  $R_1$ ,  $R_2$ ,  
 a  $-\text{C}(\text{R}_{16})_2\text{X}$  group, wherein X is  $-\text{CN}$ , halogen, hydroxy, alkoxy, benzoyloxy, C1-C6 acyloxy, amino, C1-C6 mono-alklamino, C1-C6 dialkyl amino, morpholino, piperidino, 1-indoliny, pyrrolidyl, or trimethylsilyloxy,  $R_{16}$  is hydrogen, C1-C6 alkyl, phenyl or naphthyl with C1-C6 alkyl or C1-C6 alkoxy substituents,  
 an  $-\text{OCOR}_{17}$  or  $-\text{COOR}_{17}$  group,  $R_{17}$  representing a straight or branched alkyl group comprising 1 to 6 carbon atoms, or a cycloalkyl group comprising 3 to 6 carbon atoms, or a phenyl group, optionally substituted with at least one of the substituents listed above within the values in the definitions of  $R_1$ ,  $R_2$ ,  
 a polyether, polyamide, polycarbonate, polycarbamate, polyurea or polyester residue.

27. A naphthopyran compound according to Claim 26 wherein the  $-\text{OR}$  group is methoxy.

AMENDMENT AND RESPONSE

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Dkt: 589.011US1

28. A naphthopyran compound according to Claim 26 wherein  $R_5$ ,  $R_6$ ,  $R_8$ , and  $R_{10}$  are hydrogen or linear or branched alkyl groups comprising 1-6 carbon atoms.
29. A naphthopyran compound according to Claim 26 wherein  $R_1$ ,  $R_2$  are different or the same and represent A phenyl moiety having one substituent selected from the group consisting of an anthranilyl, azepinyl, benzoxazolyl, diazepinyl, diazoyl, imidazolidinyl, imidazolyl, imidazoliny, indazolyl, indoleninyl, indolinyl, indoliziny, indolyl, indoxazinyl, isobenzazolyl, isoindolyl, isooxazolyl, isooxazolyl, isopyrrol, isoquinolyl, isothiazolyl, morpholino, morpholinyl, oxadiazolyl, oxathiazolyl, oxathiazyl, oxathioly, oxatriazolyl, oxazolyl, piperazinyl, piperazyl, piperidyl, purinyl, pyranopyrrol, pyrazinyl, pyrazolidinyl, pyrazolinyl, pyrazolyl, pyrazyl, pyridazinyl, pyridazyl, pyridyl, pyrimidinyl, pyrimidyl, pyridenyl, pyrrolidinyl, pyrrolinyl, pyrrolyl, quinoliziny, quinocyclidinyl, quinolyl, thiazolyl, triazolyl and triazol group.
30. A photochromic composition containing at least one photochromic naphthopyran compound according to Claim 26 and a polymeric host material selected from the group consisting of polycarbonates and polyvinyl alcohol.
31. A photochromic article comprising at least one photochromic naphthopyran compound according to Claim 27 a polymeric host material.
32. A photochromic article having a layer thereon comprising the photochromic article according to Claim 30 characterized that the article is an ophthalmic lens.